

## **REMARKS/ARGUMENTS**

The Examiner is thanked for the Office Action dated November 27, 2007. The status of the application is as follows:

- Claims 1-20 are pending, claims 14 and 15 have been amended herein, and claims 16-20 have been added;
- The drawings are objected to under 37 CFR 1.83(a);
- Claims 14 and 15 are rejected under 35 U.S.C. §112, second paragraph;
- Claims 1-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bilotti et al. (US 6,622,012) in view of Masashi (JP 10-197614).

The objection and rejections are discussed below.

### **The Objection to the Drawings**

The drawings stand objected to under 37 CFR 1.83(a) for not showing every feature of the invention specified in the claims. In particular, the Office asserts that the light source, the photoelectric device and the light shield of claim 5 must be shown in the drawings or cancelled from claim 5. It is believed that the amendment to the specification overcomes this objection. As such, withdrawal of this objection is respectfully requested.

### **The Rejection of Claims 14 and 15 under 35 U.S.C. 112, Second Paragraph**

Claims 14 and 15 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office asserts that it is unclear which steps the applicant is referring to in reference claims 10 and 11. This rejection should be withdrawn as claims 14 and 15 have been amended herein to respectively recite that the computer system causes the system to perform at least one of the steps of claims 10 and 11. It is believed that this amendment overcomes this rejection.

### **The Rejection of Claims 1-15 under 35 U.S.C. 103(a)**

Claims 1-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bilotti et al. in view of Masashi. This rejection should be withdrawn because the combination of Bilotti et al.

and Masashi does not teach or suggest all the limitations of the subject claims and, therefore, fails to establish a *prima facie* case of obvious with respect to the subject claims.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, (CCPA 1974). MPEP §2143.03.

Independent **claim 1** is directed towards an apparatus that includes first and second members movable one relative to the other, an element mounted in one of said members which initiates an action in the apparatus, a detector mounted in the other of said members which responds to the proximity of and detects the intensity of interaction with said element, and an inhibitor mounted in said one of said members which selectively inhibits the intensity of interaction between said element and said detector; said inhibitor, said element and said detector cooperating in determining the physical proximity of said members one relative to the other, and enabling an effective intensity of interaction between said element and said detector when said members are in close proximity one to the other. The Office asserts that the combination of Bilotti et al. and Masashi teaches the above claim aspects. In particular, the Office concedes that Bilotti et al. does not teach or suggest the claimed inhibitor, but asserts that Masashi does and that it would have been obvious to one of ordinary skill in the relevant art at the time of the invention to combine Bilotti et al. and Masashi to teach claim 1. Applicant respectfully traverses this assertion.

Bilotti et al. relates to a magnetic pole insensitive switch circuit for a cell phone. As disclosed in Bilotti et al., a cell phone 10 includes a base 12 and a cover 14 pivotably coupled thereto through a rotatable joint 16. (See column 3, lines 30-34). The movable end of the cover 14 includes a magnet 18. (See column 3, lines 38-39). A semiconductor switch 20 is located in the base 12 such that switch 20 and magnet 18 align with respect to each other when the cover 14 is closed against the base 12. (See Fig. 1). A transducer 30 provides a signal with a level that varies with the orientation of the magnet 18 to the switch 20. (See column 3, lines 53-62). When the cover 14 is open, the magnet 18 is displaced from the switch 20, and the switch 20 provides a switch signal having a first predetermined signal level, and when the cover 14 is closed, the magnet 18 is proximate to the switch 20, and the switch 20 provides a switch signal

having a second predetermined signal level. (See column 4, lines 1-9). Thus, the signal indicates whether the cover 14 is open or closed. (See column 4, lines 10-11).

Masashi relates to a magnetic detection circuit that includes a magnetic sensor 1 having an exciting coil 11 and a detection coil 12 coupled to the exciting coil 11 via a magnetic body 13, a drive circuit 2 that drives the exciting coil 11, and a constant current source 30 that provides negative feedback for an output signal from the detection coil 12 to a signal processing circuit 3 based on a signal output from the signal processing circuit 3. (See Abstract). The drive circuit 2 excites the exciting coil 11 with a periodicity current such as an alternating or pulse current. (See paragraphs [0009] and [0011]). When the magnetic field strength changes, the negative feedback from the constant current source 30 is applied to the flux density change drawn in the magnetic substance of the magnetic body 13, and fluctuation of the output of the signal processing circuit 3 is suppressed. (See paragraph [0012]). As a result, the output characteristics of the signal processing circuit 3 can be made insusceptible to fluctuations in the characteristics of the magnetic sensor 1. (See Abstract). Hence, Masashi relates to a feedback loop 30, for the signal processing circuit 3 driven by a magnetic sensor 1, which accounts for fluctuations in the field produced by the exciting coil 11 of the magnetic sensor 1.

In the subject Office Action, the Office asserts that Masashi teaches the claimed inhibitor in paragraphs [0014] – [0022]. First, the Office does not establish a *prima facie* case of obviousness because it does not identify which features of the prior art correspond to the claimed elements and limitations. To meet the burden, the Office must explain how the rejected claims are anticipated by pointing out where the specific limitations of the claims are found in the prior art. *Ex Parte Naoya Isoda*, Appeal No. 2005-2289, Application 10/064,508 (Bd. Pat. App. & Inter. 2005). As noted above, the Office Action broadly cites to nine different paragraphs (paragraphs [0014] – [0022]) without identifying which feature(s) of Masashi corresponds to the claimed inhibitor.

The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity. (MPEP §706). The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (37 C.F.R. §1.104(c)(2)). As such, applicant requests allowance of claim 1 or a non-final Office Action with specific identification of each feature or element in the cited reference which is

deemed to correspond to the claimed elements and limitations and, if possible, the location in the cited reference where the relevant feature or element is discussed.

Next, assuming *arguendo* that Bilotti et al. and Masashi were combinable (and they are not), the combination does not teach or suggest all of the aspects of claim 1. More particularly, claim 1 requires the element to be mounted in one member and the detector to be mounted in the other member, where the two members are movable one relative to the other, and an inhibitor, which is mounted in one of the two members, that selectively inhibits the intensity of interaction between the element and the detector, wherein the inhibitor, the element and the detector cooperate in determining the physical proximity of the members one relative to the other and enabling an effective intensity of interaction between the element and said detector when the members are in close proximity one to the other. The combination of Bilotti et al. and Masashi would not teach or suggest this.

More particularly, from the above discussion, the constant current source 30 (which appears to be what the Examiner deems teaches the inhibitor) is not located in a member movable with respect to a second member, wherein the member includes only one of the exciting coil 11 or the detection coil 12 and the second member includes the other of the coil 11 or coil 12. (In fact, all of the elements of Masashi appear to be grouped together). As such, modifying Bilotti et al. with the disclosure of Masashi would not teach or suggest mounting the constant current source 30 in one of two members, which move with respect to each other, along with either the exciting coil 11 or the detection coil 12. In addition, the constant current source 30 does not selectively inhibit the intensity of interaction between the coils 11 and 12. Rather, the constant current source 30 provides a feedback signal to compensate the output of the circuit 3 for fluctuations in the magnetic field strength of the magnetic sensor 1. Thus, modifying Bilotti et al. with the disclosure of Masashi would not teach or suggest an inhibitor that selectively inhibits the intensity of interaction between the coils 11 and 12. Moreover, none of the elements of Masashi, let alone the constant current source 30, cooperate with the coils 11 and 12 in determining the physical proximity of movable members, one relative to the other or enabling an effective intensity of interaction between the coils 11 and 12 when the members are in close proximity one to the other.

Furthermore, the proposed modification would change the basic principle under which Bilotti et al. operates and would render Bilotti et al. unsatisfactory for its intended purpose and,

thus, the references are not sufficient to render the claims *prima facie* obvious. (See MPEP §2143.01 VI citing *In re Ratti*, 270 F.2d 810 (CCPA 1959) (holding that the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate” and, as such, the teachings of the references are not sufficient to render the claims *prima facie* obvious); MPEP §2143.01 V citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984) (If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification)).

More particularly, the magnet 18 and switch 20 of Bilotti et al. are located in different members, which are movable with respect to each other. In Masashi, the elements, including the constant current source 30, the coil 11 and the coil 12, are located together. Thus, the device of Bilotti et al. would have to undergo a substantial reconstruction and redesign of the elements as well as a change in the basic principle under which it was designed to operate so that the transmitting coil (magnet 18 / coil 11), the receiving coil (switch 20 / coil 12), and the constant current source 30, as well as other elements of Masashi, are all located together as taught in Masashi. Doing this would also render Bilotti et al. unsatisfactory for its intended purpose as transmitting coil (magnet 18 / coil 11) and the receiving coil (the switch 20 / the coil 12) would no longer detect open and closed states. Moreover, the device of Bilotti et al. would have to undergo a substantial reconstruction and redesign of the elements as well as a change in the basic principle under which it was designed to operate so that the constant current source 30 inhibited interaction between the transmitting coil (magnet 18 / coil 11) and the receiving coil (switch 20 / coil 12), which is not taught or suggested in either Bilotti et al. or Masashi.

In view of the foregoing, this rejection should be withdrawn.

**Claim 4**, which depends from claim 1, recites that the element is a magnet, the detector is a Hall effect switch responsive to imposition of a magnetic field, and the inhibitor is a coil generating a magnetic field opposing the field of the magnet. The Office asserts that these claim aspects are taught in paragraph [0009] of Bilotti et al. However, paragraph [0009] of Bilotti et al. does not teach or suggest such claim aspects. Instead, paragraph [0009] of Bilotti et al. states “[t]he electromagnetic coupling of said exciting coil and said sensing coil of each other is carried out through the magnetic substance with which said magnetometric sensor constitutes a

magnetic circuit, including an exciting coil and a sensing coil at least. Said drive circuit supplies and excites a periodicity current to said exciting coil.” Paragraph [0009] of Bilotti et al. is silent regarding an inhibitor coil that generates a magnetic field opposing the field of the exciting coil 11. Therefore, this rejection should be withdrawn.

**Claim 7**, which depends from claim 1, recites that the inhibitor is responsive to a coded driving signal and further wherein the inhibitor, the element and the detector cooperate in determining the physical proximity of the members one relative to the other by detection of the coded driving signal. The Office asserts that these claim aspects are taught in paragraph [0011] of Bilotti et al. However, paragraph [0011] of Bilotti et al. does not teach or suggest such claim aspects. Instead, paragraph [0011] of Bilotti et al. states “[i]f periodicity currents, such as an alternating current or pulse current, are supplied to an exciting coil from a drive circuit and an exciting coil is excited, induction of the electrical potential difference will be carried out to a sensing coil at the tie of the start of the supplied periodicity current, or falling. A digital disposal circuit processes and outputs the signal supplied from a sensing coil.” Paragraph [0011] of Bilotti et al. is silent regarding an inhibitor responsive to a coded driving signal and further wherein the inhibitor, the exciting coil 11 and the detection coil 12 cooperate in determining the physical proximity of the members one relative to the other by detection of the coded driving signal. Thus, this rejection should be withdrawn.

Independent **claim 8** recites aspects similar to those recited in claim 1. As such, the above discussion regarding claim 1 applies *mutatis mutandis* to claim 8.

**Claim 9**, which depends from claim 8, recites aspects similar to those recited in claim 4. As such, the above discussion regarding claim 4 applies *mutatis mutandis* to claim 8.

Independent **claims 10 and 11** recite aspects similar to those recited in claim 1. As such, the above discussion regarding claim 1 applies *mutatis mutandis* to claims 10 and 11.

**Claims 2-3, 5-6 and 12-15** depend from claims 1, 10 and 11, and are allowable at least by virtue of their dependencies.

### **New Claims 16-20**

Newly added claims 16-20 emphasize various aspects. No new matter has been added.

**Claims 16 and 18** include aspects related to filtering detectable noise. The art of record does not teach or suggest these claim aspects.

**Claim 17** recites that the detector responds to corpuscular radiation. Such aspects are absent from the art of record.

**Claim 19** recites that the method further includes preventing detection of the output. Neither Bilotti et al., Masashi, nor the combination thereof, teaches or suggests such claim aspects.

**Claim 20** recites that the inhibitor is activated by a power supply external to the inhibitor. As noted *supra*, the combination of Bilotti et al. and Masashi does not teach or suggest the claimed inhibitor. As such, this combination cannot teach the subject claim aspects.


Entry and allowance of claims 16-20 is respectfully requested.

### **Conclusion**

It is believed that each of the claims now in the application is distinguishable one from the other and over the prior art. Therefore, reconsideration and allowance of the claims is respectfully requested.

Respectfully submitted,

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